



ABSTRACT

A projecting optical system for decreasing a height of an optical system is provided. The system includes a lamp for irradiating light, a color divider for dividing colors of light irradiated from the lamp, an illumination mixer for irradiating the light with equal light intensity, a channel-changing prism for changing a channel of light irradiated from the illumination mixer to upward and downward, and a TIR prism for changing a direction and angle of light to a predetermined direction and angle.